

## ***Begonia tuberhybrida (multiflora)*** **New Star® Red**

### ***Culture guide***

**Uses:**

Annual, pot plants, patio containers, window boxes, bedding and landscape

**Exposure:**

Sun - Partial shade

**Garden height:**

9" / 23 cm

**Crop time:**

14-16 weeks

**Sowing method:**

1-2 seeds per plug

**Germination:**

Germination will occur in 7-14 days at 75-78 °F (23-25 °C). Sow seed on a fine media with good water holding capacity and good drainage. Consistent moisture levels are important to uniform germination. Humidity levels above 95 % and a media pH between 5.5 and 6.5 are important. Do not cover seed as light is required to germinate. Supplemental 24-hour assimilation light provided at this stage will increase germination, reduce crop time and improve plug quality.

During Stage II gradually lower temperature to 72-75 °F (22-23 °C). Maintain Stage I moisture and humidity levels. Begin fertilizing at 50-75 ppm nitrogen in a well balanced mix containing calcium nitrate. Continue assimilation lighting during Stage II: 28-42 days. Maintain Stage II temperature for Stage III and Stage IV. Gradually lower humidity levels but maintain soil moisture levels, avoid saturated or dry media. Increase fertilizer levels to

75-100 ppm nitrogen in a balanced mix during Stage III. During Stage I levels may be increased to 100-150 ppm nitrogen. Continue assimilation lighting or use at least

50 ft.c. (550 lux) light to extend days or use night interruption. Long day conditions are necessary to avoid tuber formation or delay the crop.

Applications of Cycocel at 150-250 ppm can be used to control growth.

**Growing On:**

Transplant plugs into finished containers with a well drained media, and pH of 5.5 to 6.5. Maintain day length in excess of 14 hours. Continued supplemental lighting will improve plant quality and shorten crop time. Growing temperatures between 68-72 °F (18-22 °C) optimize growth and flowering. Fertilize at 150-250 ppm nitrogen in a well-balanced formula.

**Media:**

Use a well-drained, growing substrate with 15-30 % clay, 0-20 % perlite, 1-2 kg/m<sup>2</sup> complete balanced fertilizer, iron-chelate, micronutrients, pH 5.5-6.2.

**Temperature:**

Grow at 16-18 °C. 10 days before selling temperature can be decreased to 16 °C. Temperatures below 14 °C will result in tuber formation and crop delay.

**Fertilization:**

Moderate fertilization levels are required. Fertilize weekly with 150-200 ppm nitrogen, using a complete and potassium balanced fertilizer (N:K<sub>2</sub>O-ratio: 1:1,5). Keep low ammonium levels, otherwise the roots become damaged. At high nitrogen levels the foliage can become very big. Avoid pH above 6.5, as high pH causes iron deficiency. Apply chelated iron, if chlorosis becomes a problem. To prevent magnesium deficiency apply magnesium sulphate (0,025 %) 1-2 times. Additional foliage fertilization with potassium supports compact plant growth and provides a dark green foliage colour. Avoid high soluble salts in the soil.